

Appl. No. 10/045,277
Amdt. dated 09/14/2005
Reply to Office Action of 06/14/2005

REMARKS

In the above-identified Office Action, the Examiner rejected Claims 1 - 3, 6 - 8, 11 - 13 and 16 - 18 under 35 U.S.C. §102(e) as being anticipated by US Patent Application number 2002/0112102 (hereinafter Tarui et al.). Claims 4, 5, 9, 10, 14, 15, 19 and 20 were rejected under 35 U.S.C. §103 as being unpatentable over Tarui et al. in view of Zalewski et al.

In reviewing the Specification, Applicants have encountered a few typographical/grammatical errors which have been corrected. Further, Applicants have canceled Claims 1 - 20 and added new Claims 21 - 28 for consideration. For the reasons stated more fully below, Applicants submit that the claims are allowable over the applied references. Hence, reconsideration, allowance and passage to issue are respectfully requested.

As stated in the SPECIFICATION, many computer manufacturers design computer systems with partitioning capability. To partition a computer system is to divide the computer system's resources (i.e., memory devices, processors etc.) into groups; thus, allowing for a plurality of operating systems to be concurrently executing on the computer system.

Partitioning a computer system may be done for a variety of reasons, including increased flexibility of resource allocation. For example, a workload that has resource requirements that vary over a period of time may be managed more easily if it is being run on a partition.

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That is, the partition may be easily altered to meet the varying demands of the workload.

However, when a resource is assigned to a partition, no other partitions may use the resource. If another partition requests the use of the resource, then the resource has to be manually reassigned to the other partition. The present invention provides for automatic reassignments of resources to partitions whenever needed. That is, the present invention provides a method of allowing a hardware resource to be shared between partitions of an LPAR system.

To facilitate the sharing of resources or the automatic reassignment of resources to partitions, a user (such as a system administrator) has to have initially set the system up for such a usage. To set up the system for such a usage, the user may use a cross-reference table. The table may be organized into sharable resources and the partitions that may share them and non-sharable resources. Alternatively, each resource may have a profile. In the profile it may be indicated whether the resource is a sharable resource or not. If the resource is a sharable resource, the partitions that may share the resource may be identified.

Consequently, when a partition requests the use of a resource, a determination must be made to ascertain that the requesting partition has permission to use the resource since not all partitions may have authorization to use the resource. If the requesting partition has permission to use the resource, the resource may be automatically reassigned to the requesting partition.

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After the partition has finished using the resource, the resource may be re-assigned back to the partition to which it was originally assigned. This allows another partition to have access to the resource.

The invention is set forth in claims of varying scopes of which Claim 21 is illustrative.

21. A method of allowing a resource to be shared by a plurality of partitions of a logically partitioned system, comprising the steps of:

originally assigning the resource to one partition;

indicating in a file all partitions of the system that may use the resource;

determining whether the resource is presently assigned to a partition requesting usage of the resource;

consulting the file to determine, upon receiving the request from the requesting partition, whether the requesting partition may use the resource if the resource is not presently assigned to the requesting partition;

determining, if the requesting partition may use the resource, whether the resource is presently being used by another partition;

automatically reassigning the resource to the requesting partition if the resource is not being used by another partition; and

re-assigning the resource back to the partition to which the resource was originally assigned if the requesting partition is not the partition to which the resource was originally assigned and the requesting partition has terminated using the resource. (Emphasis added.)

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Although the Examiner admitted that Tarui et al. do not teach the step of re-assigning a resource that has been assigned from an original partition to another partition back to the original partition once it is no longer in use, the Examiner, nonetheless, rejected the claims. In support for the rejection, the Examiner asserted that Zalewski et al. teach such step. Consequently, the Examiner concluded one skilled in the art could combine the teachings of the two references to arrive at the claimed invention. Applicants respectfully disagree.

Zalewski et al. purport to teach software partitioned multi-processor system with flexible resource sharing levels. In accordance with the teachings of Zalewski et al., a computer system may be subdivided by software into multiple partitions, each with the ability to run a distinct copy of an operating system. Each partition has access to its own physical resources plus resources designated as shared. Generally, each resource is owned by a partition or else it cannot be used. Any partition that wants to use a resource must have current ownership of the resource. Thus, when a partition makes a request to use a shared resource that it is not currently owned, the current ownership of the resource must be changed. Before it is changed, however, the owning partition will be forced to stop using the resource (see col. 18, lines 50 - 63).

Hence, Zalewski et al. do not teach, show or suggest the step of *re-assigning the resource back to the partition to which the resource was originally assigned if the requesting partition is not the partition to which the*

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resource was originally assigned and the requesting partition has terminated using the resource as claimed.

The Examiner cited passages in col. 7, lines 42 - 57, col. 20, lines 24 - 45 and in col. 21, line 30 to col. 22, line 24 as proof that Zalewski et al. do indeed teach the above-emboldened-italicized step. Applicants disagree.

In col. 7, lines 42 - 57, Zalewski et al. disclose that resources may be re-assigned from one partition to another.

Again, in col. 20, lines 24 - 45, Zalewski et al. disclose that resources, such as CPUs, may be re-assigned from one partition to another.

In col. 21, line 30 to col. 22, line 24 Zalewski et al. disclose that partitions may pass to each other and receive messages from each other. Zalewski et al. also state in the cited passage that when a resource is moved from one partition to another, the partition that currently owns the resource must remove itself as owner of the resource and indicate the new owner of the resource. The new owner can then use the resource. When a partition releases a resource, the partition may no longer access the component.

However, nowhere in the cited passage do Zalewski et al. disclose the step of **re-assigning a resource back to the partition to which the resource was originally assigned if the requesting partition is not the partition to which the resource was originally assigned and the requesting partition has terminated using the resource** as claimed.

Consequently, Applicants submit that Claim 21 and its dependent claim should be allowable over the cited

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references. Independent Claims 23, 25 and 27 and their respective dependent, which all incorporate the above-emboldened-italicized limitations shown in the reproduced Claim 21 above, should be allowable as well.

Therefore, Applicants once more respectfully request reconsideration, allowance and passage to issue of the claims in the application.

Respectfully submitted,

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